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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/218,554	12/22/1998	ERIC COHEN-SOLAL	PHA-23.595	2898

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
ROSENDALE, MATTHEW L	

ART UNIT	PAPER NUMBER
2612	12

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/218,554	COHEN-SOLAL ET AL.	
	Examiner	Art Unit	
	Matthew L Rosendale	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13* is/are allowed.

6)☒ Claim(s) *1-12,14-18 and 20-24* is/are rejected.

7)☒ Claim(s) *25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

Applicant's arguments regarding claims 1 – 12 and 20 – 25, filed 10/22/03 have been fully considered but they are not persuasive. As to claims 1 and 20, the applicant argues that Masunaga et al fails to disclose defining a space based upon a layout of the video conferencing system. As interpreted by the examiner, the defined space of Masunaga et al is implicitly defined as the camera's field of view through all panning values. Since there are no specific details in claim 1 or 20 as to the method of defining the space of the conference area, only that the space is based upon the layout of the video conferencing system, Masunaga meets the broad limitation of defining a space based upon a layout of the video conferencing system which would be met by any video conferencing system that defines its conferencing area based on its camera's full field of view.

Response to Amendment

Applicant's arguments with respect to claims 14 - 18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 – 3 and 20 - 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Masunaga et al.

Referring to claim 1, Masunaga discloses a method of calculating presets of camera parameters corresponding to participants in a video conferencing system where the method comprises a camera having tilt, pan and zoom parameters, defining a space based upon the layout of the video conferencing room where the camera is panned so that all possible participants can be viewed by the camera and so that a location of each participant in the room can be determined as shown in figures 4a – 4d. Camera presets are then calculated based on the optimal position of each participant with respect to the alignment of the center of the participant with respect to the center of the camera view (Col. 5, Line 48 – Col. 7, Line 53).

2. Referring to claim 2, Masunaga discloses means of tracking each participant by associating a label with each participant. As shown in figures 3a and 3b, each participant is labeled with a letter A, B, C, or D.

3. Referring to claim 3, Masunaga discloses that when the number of attendants change such as deleting a participant, the presets for each remaining participants are updated (Col. 8, Lines 46 – 53).

4. Referring to claim 20, Masunaga discloses a video conferencing system comprising a camera having tilt, pan and zoom parameters, defining a space based upon the layout of the video conferencing room where the camera so that a location of each participant in the room can be determined by panning the camera though the room as shown in figures 4a – 4d. Camera presets are then calculated based on determining the optimal position of each participant with respect to the alignment of the center of the participant with the center of the camera view as shown in figures 3a and 3b (Col. 5, Line 48 – Col. 7, Line 53).

5. Referring to claim 21, Masunaga discloses means of tracking each participant by associating a label with each participant. As shown in figures 3a and 3b, each participant is labeled with a letter A, B, C, or D.

6. Referring to claim 22, Masunaga discloses that when the number of attendants change such as deleting a participant, the presets for each remaining participants are updated (Col. 8, Lines 46 – 53).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 4 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masunaga in view of Maeng.

Referring to claims 4 and 23, Masunaga discloses a video conferencing apparatus that is able to detect individual participants and store camera presets based on the center of the participant in the camera's view as shown in figures 3a and 3b. Masunaga does not disclose a means to combine participants into one image and the center of the image is used to determine the presets.

However, Maeng discloses a video conferencing apparatus that can combine multiple participants as shown in figure 11, into one camera view where the center of the detected participants is used to determine the preset value of the camera view. Maeng also discloses that combining participants in the camera view is advantageous because, in the event of multiple patricians talking, they can both be viewed by zooming the camera out and combining the images opposed to having the camera move back and forth to individual presets for each participant. Another use proposed by Maeng would be for zooming out to view all participants in the conferencing room if no participant is taking (Col. 9, Lines 42 – 67).

Therefore it would have been obvious to use the teachings of Maeng and provide the ability of combining participants into singe camera view's and store the camera preset locations so that camera can accurately capture all events in the video conference and have the ability to always be able to view all participants who are talking instead of having to switch back and forth in the middle of discussion.

8. Claims 5 – 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masunaga in view of applicants' conceded prior art ACPA referring to Abdel-Mottaleb et al US Pat No. 6,263,113.

Referring to claim 5, Masunaga discloses a video conferencing apparatus that detects participants in the camera's view. Masunaga does not detect participants by providing a digital image composed of a plurality of pixels, producing a binary image from the digital image by detecting skin colored pixels, removing pixels corresponding to edges in the luminance component of the binary image producing binary image components and mapping the binary image components into a graph where they are classified as facial and non-facial candidates.

However, this method of detecting people in a camera's view is well known as taught by Abdel-Mottaleb as shown in figure 10. Therefore it would have been obvious to use the detection method of Abdel-Mottaleb with the video conferencing device of Masunaga so that participants in the view of the camera may be accurately detected.

9. Referring to claim 6, Abdel-Mottaleb discloses a detection method further comprising a step of applying a heuristic of applying a morphological closing operation on each facial candidate to produce a closed facial candidate where high variance pixels are determined in the facial candidate along with the ratio between the high variance pixels and the total number of pixels in the face candidate. The ratio is then compared to a threshold (Col. 6, Lines 13 – 19).

10. Referring to claim 7, Abdel-Mottaleb discloses a detection method comprising a step of removing pixels corresponding to edges in the luminance component by applying a mast to a

plurality of pixels including an examined pixel, determinate the variance between the examined pixel and pixels disposed within the mask and comparing the variance to a variance threshold (Col. 3, Line 60 – Col. 4, line 28).

11. Referring to claim 8, Abdel-Mottaleb further discloses that the step of removing pixels corresponding to edges in the luminance component is repeated for decreasing variance thresholds until a size of the binary image components is below a component size threshold, and after each step of removing, the step of classifying components is performed (Col. 4, lines 14 – 28).

12. Referring to claim 9, Abdel-Mottaleb discloses that the binary image components are connected (Col. 4, Lines 14 – 28).

13. Referring to claim 10, Abdel-Mottaleb discloses that the step of classifying mapped binary image components as facial and non-facial types comprises forming a bounding box around a classified component of the components and forming a bounding box around a classified component, comparing an area of the bounding box to a bounding box threshold, and comparing an aspect ratio of the bounding box to an aspect ratio threshold (Col. 4, Lines 29 – 63).

14. Referring to claim 11, Abdel-Mottaleb discloses that the step of mapping binary image components into a graph comprises representing each component as a vertex; connecting vertices

with an edge when close in space and similar in color, thereby forming a graph (Col. 5, Lines 13 – 49).

15. Referring to claim 12, Abdel-Mottaleb discloses that each edge has an associated weight and further comprises the steps of extracting the minimum spanning tree of each graph, classifying the corresponding binary image components of each graph as either a face or not a face, removing the edge in each graph with the greatest weight thereby forming two smaller graphs, and repeating the step of classifying the corresponding binary image components for each of the smaller graphs until a bounding box around the smaller graph is smaller than a graph threshold (Col. 5, Lines 31 – 60).

16. Referring to claim 24, Masunaga discloses a video conferencing apparatus that detects participants in the camera's view. Masunaga does not detect participants by providing a digital image composed of a plurality of pixels, producing a binary image from the digital image by detecting skin colored pixels, removing pixels corresponding to edges in the luminance component of the binary image producing binary image components and mapping the binary image components into a graph where they are classified as facial and non-facial candidates. However, this method of detecting people in a camera's view is well known as taught by Abdel-Mottaleb as shown in figure 10.

Therefore it would have been obvious to use the detection method of Abdel-Mottaleb with the video conferencing device of Masunaga so that participants in the view of the camera may be accurately detected.

17. Claims 14 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ippolito et al in view of Masunaga et al.

Referring to claim 14, Ippolito discloses a prior art video conferencing system comprising a plurality of video cameras having a fixed position to capture an image of each participant where the conferencing system selects on of the cameras to display the selected participant (Col. 2, Line 63 – Col. 3, Line 21). The prior art video conferencing system of Ippolito does not disclose a means of detecting each participant to define a preset camera position to place the participant in an optimum position for image capture.

However, Masunaga discloses a video conferencing system comprising a camera having tilt, pan and zoom parameters, defining a space based upon the layout of the video conferencing room where the camera so that a location of each participant in the room can be determined by panning the camera though the room as shown in figures 4a – 4d. Camera presets are then calculated based on determining the optimal position of each participant with respect to the alignment of the center of the participant with the center of the camera view as shown in figures 3a and 3b (Col. 5, Line 48 – Col. 7, Line 53).

Therefore it would have been obvious to provide the preset position detection means of Masunaga with the video conferencing system of Ippolito so that each camera can be adjusted to capture the image of the corresponding participate at the optimum viewing position.

18. Referring to claim 15, Masunaga discloses means of tracking each participant by associating a label with each participant. As shown in figures 3a and 3b, each participant is labeled with a letter A, B, C, or D.

19. Referring to claim 16, Masunaga discloses that when the number of attendants change such as deleting a participant, the presets for each remaining participants are updated (Col. 8, Lines 46 – 53).

20. Claim17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ippolito et al in view of Masunaga et al in further view of Maeng.

Referring to claim 17, Masunaga discloses a video conferencing apparatus that is able to detect individual participants and store camera presets based on the center of the participant in the camera's view as shown in figures 3a and 3b. Masunaga does not disclose a means to combine participants into one image and the center of the image is used to determine the presets.

However, Maeng discloses a video conferencing apparatus that can combine multiple participants as shown in figure 11, into one camera view where the center of the detected participants is used to determine the preset value of the camera view. Maeng also discloses that combining participants in the camera view is advantageous because, in the event of multiple patricians talking, they can both be viewed by zooming the camera out and combining the images opposed to having the camera move back and forth to individual presets for each participant. Another use proposed by Maeng would be for zooming out to view all participants in the conferencing room if no participant is taking (Col. 9, Lines 42 – 67).

Therefore it would have been obvious to use the teachings of Maeng and provide the ability of combining participants into singe camera view's and store the camera preset locations so that camera can accurately capture all events in the video conference and have the ability to always be able to view all participants who are talking instead of having to switch back and forth in the middle of discussion.

21. Claim18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ippolito et al in view of Masunaga et al in further view of Maeng in further view of applicants' conceded prior art ACPA referring to Abdel-Mottaleb et al US Pat No. 6,263,113.

Referring to claim 18, Masunaga discloses a video conferencing apparatus that detects participants in the camera's view. Masunaga does not detect participants by providing a digital image composed of a plurality of pixels, producing a binary image from the digital image by detecting skin colored pixels, removing pixels corresponding to edges in the luminance component of the binary image producing binary image components and mapping the binary image components into a graph where they are classified as facial and non-facial candidates. However, this method of detecting people in a camera's view is well known as taught by Abdel-Mottaleb as shown in figure 10.

Therefore it would have been obvious to use the detection method of Abdel-Mottaleb with the video conferencing device of Masunaga so that participants in the view of the camera may be accurately detected.

Allowable Subject Matter

Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 23, the prior art fails to teach or suggest the prior art fails to teach or suggest a second camera for updating participant presets of a first camera.

Claim 13 is allowed.

The following is a statement of reasons for the indication of allowable subject matter: Referring to claim 13, the prior art fails to teach or suggest the prior art fails to teach or suggest a second camera for updating participant presets of a first camera.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew L Rosendale whose telephone number is (703) 305-4909. The examiner can normally be reached on Monday - Friday 8: 00am-4: 00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306-0377.

MLR